Computer Science Standards

Grade 1

# **Computing Systems**

## Devices

* **1.CS.D.01** With guidance, select and use a computing device to perform a variety of tasks for an intended outcome.

## Hardware and Software

* 1.CS.HS.01 Use accurate terminology in naming and describing the function of common computing devices and components (e.g., laptop, tablet, mouse).

## Troubleshooting

* **1.CS.T.01** Identify simple hardware and software problems that may occur during use (e.g., app or program is not working as expected; no sound is coming from the device; caps lock turned on).

# **Network and the Internet**

## Network Communication and Organization

* **1.NI.NCO.01** Recognize that by connecting computing devices together they can share information (e.g., remote storage, printing, the internet).

## Cybersecurity

* 1.NI.C.01 Identify what passwords are; explain why they are not shared; and discuss what makes a password strong. Independently, use passwords to access technological devices, apps etc.

# **Data Analysis**

## Storage

* **1.DA.S.01** With guidance, locate, open, modify and save an existing file with a computing device.

## Collection, Visualization and Transformation

* **1.DA.CVT.01** With guidance, collect data and present it two different ways.

## Inference and Models

* 1.DA.IM.01 With guidance, interpret data from a chart or graph (visualization) in order to make a prediction, with or without a computing device.

# **Algorithms and Programming**

## Algorithms

* 1.AP.A.01 With guidance, model daily processes and follow algorithms (sets of step‐by‐step instructions) to complete tasks verbally, kinesthetically, with robot devices, or a programing language.

## Variables

* 1.AP.V.01 With guidance, model and represent grade level appropriate data (e.g., print, numbers, kinesthetic movement, symbols and robot manipulatives).

## Control

* 1.AP.C.01 With guidance, create programs to accomplish tasks as a means of creative expression or problem solving using a programming language, robot device or unplugged activity, either independently or collaboratively including sequencing and repetition.

## Modularity

* 1.AP.M.01 Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions.

## Program Development

* **1.AP.PD.01** Independently or with guidance, create a grade level appropriate document to illustrate thoughts, ideas, and stories in a sequential (step‐by‐ step) manner (e.g., story map, storyboard, and sequential graphic organizer).
* **1.AP.PD.02** Independently or with guidance give credit to ideas, creations and solutions of others while writing and/or developing programs.
* **1.AP.PD.03** Independently and collaboratively, debug programs, which include sequencing and repetition to accomplish tasks as a means of creative expression or problem solving using a programming language and/or unplugged activities.
* 1.AP.PD.04 Use correct terminology (beginning, middle, end...), and explain the choices made in the development of an algorithm and/or program to solve a simple problem.

# **Community, Global and Ethical Impacts**

## Culture

* 1.CGEI.C.01 Identify how people use many types of technologies in their daily work and personal lives.

## Social Interactions

* 1.CGEI.SI.01 With guidance, identify appropriate and inappropriate behavior. Act responsibly while participating in an online community and know how and who to report concerns.

## Safety, Law and Ethics

* **1.CGEI.SLE.01** Keep log in information private, and log off of devices appropriately.